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SUMMARY  
OF THE  
SIXTEENTH ANNUAL CONFERENCE ON SHOCK  
JUNE 13 - 16, 1993  
SANTA FE, NEW MEXICO

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July 10, 1994

Dr. Jeannine Majde  
Scientific Officer Code: 114SB  
Office of Naval Research  
800 North Quincy Street  
Arlington, Virginia 22217-5000

RE: Grant N00014-93-1-0951

Dear Jeannine:

On behalf of the Scientific Program Committee, Officers and Council of the Society, I want to thank the Office of Naval Research for the support of Symposia and Awards at the Sixteenth Annual Conference on Shock, June 13-16, Santa Fe, New Mexico and the Combined Meeting of the Eighth International Lymphokine Workshop and the Fourth International Workshop on Cytokines, October 17-21, 1993, Osaka, Japan.

These meetings were very successful and attended by many scientists and physicians throughout the world. We are grateful for the support of the Department of the Navy which helped make this meeting possible.

I am enclosing a copy of "Circulatory Shock" which contains the program (pages 1-4) and abstracts (pages 5-111) for the Shock Conference. A Summary of the Conference by James Cook, Program Chair, is also enclosed. The meeting in Japan is summarized by Scott Durum.

I look forward to a continued association of the Society with the Office of Naval Research.

Sincerely,

Sherwood M. Reichard  
Executive Director

# DUPLICATE ORIGINAL

DEPARTMENT OF THE NAVY  
OFFICE OF NAVAL RESEARCH, CODE 2512:KIJ  
800 NORTH QUINCY STREET  
ARLINGTON, VIRGINIA 22217-5660

GRANT NO: N00014-93-1-0951  
R&T PROJECT: 4414303---01  
ACO CODE: N66020  
CAGE CODE: 0L2Y2  
DISBURSING CODE: N00179  
PI: SHERWOOD M. REICHARD

## SYMPOSIUM GRANT

GRANTEE: MEDICAL COLLEGE OF GEORGIA  
RETICULOENDOTHELIAL SOCIETY  
RESEARCH INSTITUTE  
1120 15TH STREET  
AUGUSTA, GA 30912

APPROPRIATION: AA 1731319 .W1AE  
Object Class: 000  
Unit Ident Code: RA444  
Suballotment: 0  
Auth. Acct. No: 068342  
Transaction Type: 2B  
Prop. Acct. Act.: 000000  
Cost Code: 041080000200  
Amount: \$10,000.00  
FRC: 4414

R&T Project Code: 4414303---01, Dated: 07 APR 1993

TOTAL GRANT AMOUNT: \$10,000.00.

AUTHORITY: 10 USC 2358 as amended, and 31 USC 6304.

GRANT PURPOSE: The Purpose of this Grant is to provide partial funding to support Symposia and Awards at the Sixteenth Annual Conference of Shock and the combined meeting of the Eighth International Lymphokine Workshop, and the Fourth International Workshop on Cytokines.

The conduct of the workshop, the personnel and effort and the use of funds for direct and indirect expenses shall generally be as set forth in the Grantee's proposal entitled "Symposia and Awards at the Sixteenth Annual Conference of Shock and the combined meeting of the Eighth International Lymphokine Workshop, and the Fourth International Workshop on Cytokines. which proposal is incorporated herein by reference. The Grantee agrees to obtain concurrence of the Grantor for any desired deviation from the proposal.

PERIOD: The Grant is for the period 01 JUN 1993 through 31 MAY 1994.

The Shock Society Program Chair Dr. Cook with support of his program committee of Drs. Bob Bond, Frank Cerra, Mitch Fink, John Flynn, and Mohammed Sayeed reviewed and placed a record breaking total of 240 abstracts for the final program. The number of national and international participants and the scientific quality of the abstracts are further indications that the Shock Society is flourishing. The committee selected 32 abstracts for presentation in four minisymposia which cover topics, i.e. "Adhesion Molecules", "Mediators", "Endotoxin/Sepsis", and "Hemorrhage/Ischemia-Reperfusion". Four Shock Society members have served as Chairs for the respective sessions: Gerald Till, Reuven Rabinovici, Richard Raymond and Bob Bond.

In addition, 194 abstracts were scheduled as poster presentations in three sessions: "Hemorrhage/Ischemia-Reperfusion", "Mediators", and "Endotoxin/Sepsis". Four outstanding finalist for the Young Investigator Award were selected and presented in a stimulating award session.

This year for the first time, a workshop "Basic Molecular Biology Concepts and Techniques" was scheduled on Sunday. The workshop was conducted by two excellent molecular biologists, Brett Giroir and Jim Norris. Renowned speakers were selected for three symposia dealing with the "Role of Nitric Oxide in Sepsis and Tissue Injury", "Molecular Mechanisms in Shock", and "New Insights into Cytokine Interactions" (below).

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## **SYMPOSIUM I - BIOLOGICAL ROLES OF NITRIC OXIDE IN SEPSIS AND TISSUE INJURY**

**Moderators: H. Richard Adams, D.V.M., Ph.D.  
and James R. Parratt, Ph.D., M.D.**

### **Introductory Comments**

- 1. Nitric Oxide: An Endogenous Immunomodulator and Microbicidal Factor**  
John B. Hibba, Jr., M.D.  
Department of Medicine  
University of Utah  
Salt Lake City, Utah
- 2. Exogenous Nitric Oxide: Therapeutic Implication in Acute Respiratory Disease**  
Jesse D. Roberts, Jr., M.D.  
Department of Anesthesiology  
Boston Mass General Hospital  
Boston, Massachusetts
- 3. Involvement of Endothelium-Derived Nitric Oxide in Ischemia-Reperfusion Injury**  
Allan M. Lefer, Ph.D.  
Chairman, Department of Physiology  
Jefferson Medical College  
Philadelphia, Pennsylvania
- 4. Modulatory roles of Nitric Oxide in Vascular Responses During Sepsis and Endotoxemia**  
James R. Parratt, Ph.D., M.D.  
Department of Physiology and Pharmacology  
Cardiovascular Research  
University of Strathclyde Royal College  
Glasgow, Scotland
- 5. Therapeutic Use of Nitric Oxide Synthetase Inhibitors in Shock: Indicated or Contraindicated**  
H. Richard Adams, D.V.M., Ph.D.  
Chairman, Department of Veterinary Biomedical Sciences  
University of Missouri  
Columbia, Missouri

## **SYMPOSIUM II - MOLECULAR MECHANISMS IN SHOCK**

**Moderator: James P. Filkins, Ph.D. and Timothy G. Buckman, Ph.D.**

- 1. Bacterial Endotoxin: Cellular Recognition Mechanisms**  
**John C. Mathison, Ph.D.**  
**Department Immunology**  
**The Scripps Research Institute**  
**La Jolla, California**
- 2. Cellular Signal Transduction Events to Endotoxin; Role of G Proteins**  
**James A. Cook, Ph.D.**  
**Department of Physiology**  
**Medical University of South Carolina**  
**Charleston, South Carolina**
- 3. Cellular Signal Transduction Mechanisms in Regulation of Phospholipase A<sub>2</sub>**  
**Edward A. Dennis, Ph.D.**  
**Department of Chemistry**  
**University of California at San Diego**  
**La Jolla, California**
- 4. Transcriptional/Translational Control of Tumor Necrosis Factor by Endotoxin**  
**Brett P. Giroir, M.D.**  
**Howard Hughes Medical Institute**  
**Research Laboratories**  
**Dallas, Texas**
- 5. Potential for Gene Therapy in Sepsis**  
**Kenneth L. Brigham, M.D.**  
**Director, Division of Pulmonary Medicine**  
**and Pulmonary Circulation Center**  
**Vanderbilt University**  
**Nashville, Tennessee**

**SYMPOSIUM III - NEW INSIGHTS INTO MEDIATOR INTERACTIONS IN SEPSIS  
AND ARDS**

**Presiding, Ronald V. Maier, M.D.  
and J. Raymond Fletcher, M.D., Ph.D.**

- 1. Role of Complement in ARDS and Sepsis: Studies with Soluble Human Recombinant Complement Receptor Type 1**  
**Giora Z. Feuerstein, M.D.**  
**Director, Cardiovascular Pharmacology**  
**SmithKline & Beecham**  
**King of Prussia, Pennsylvania**
- 2. Cytokine Interactions in Sepsis; Interleukin-8 and Monocyte Chemoattractant Proteins-1**  
**Robert M. Strieter, M.D.**  
**Division of Pulmonary Medicine**  
**Department of Internal Medicine**  
**University of Michigan,**  
**Ann Arbor, Michigan**
- 3. LTB<sub>4</sub> - A Potent Pro-Inflammatory Mediator, Interaction with other Mediators**  
**Mitchell P. Fink, M.D.**  
**Director, Surgical ICU's**  
**Department of Surgery**  
**University of Massachusetts Medical Center**  
**Boston, Massachusetts**
- 4. The Association Between Prostaglandins and Cytokines in Sepsis**  
**Ishad H. Chaudry, Ph.D.**  
**Professor and Associate Chairman and Director of Research**  
**Departments of Surgery and Physiology**  
**Michigan State University**  
**East Lansing, Michigan**
- 5. Interactions of Eicosanoids and Cytokines in Regulation of IL-6**  
**Bryan L. Spangelo, Ph.D.**  
**Department of Physiology**  
**Medical University of South Carolina**  
**Charleston, South Carolina**

**Workshop: Basic Molecular Biology Concepts and Techniques  
(Sunday)**

**Instructors: James S. Norris, Ph.D., Professor of**  
**Rheumatology/Immunology, Medical University of South**  
**Carolina and Brett P. Giroir, M.D., Howard Hughes Medical**  
**Institute Research Laboratories, Dallas, Texas**

### **Mini Symposia (I - IV)**

The mini-symposia and poster session will be organized from abstracts submitted to the membership. Specific areas for encouragement of submission that I believe would be good are:

- 1. Endotoxin binding proteins**
- 2. Anti-adhesion antibodies**
- 3. Neonatal sepsis**
- 4. Autocrine/paracrine signals in shock**
- 5. Therapeutic approaches (prevention/treatment)**
- 6. Nutrition and Inflammation**
- 7. Gut translocation**

In continuation of the highly successful controversies in shock research workshop, Don Fry and Greg Bagby hosted another timely and lively debate concerning "Controversies in Shock Research".

### **Controversies in Shock Research Workshop Presiding, Don Fry, M.D. and Craig Bagby**

- 1. Cost/Benefit Issues in Critical Care Medicine**
  - a. Cost/benefits should not be an issue in critical care**  
**Mark C. Rogers, M.D.**  
Professor and Chairman  
Department of Anesthesiology and Critical Care Medicine  
Johns Hopkins Hospital  
Blalock 1415, 600 N. Wolfe Street  
Baltimore, Maryland 21205
  - b. Cost/benefits should be an issue in critical care**  
**Charles L. Rice, M.D.**  
Chairman, Division of General Surgery  
Hudson-Penn Professor of Surgery  
University of Texas Southwestern Medical School  
5323 Harry Hines Blvd.  
Dallas, Texas 75235-9031
- 2. Role of Tumor Necrosis Factor in the Pathogenesis Sepsis**
  - a. TNF is a pathogenic mediator in sepsis**  
**Thomas E. Emerson, Jr., Ph.D.**  
Research Fellow  
Department of Experimental Therapeutics  
Miles Pharmaceutical Division Products  
Fourth and Parker Streets  
Berkeley, California 94710



- b. **TNF is a beneficial cytokine in sepsis**  
**Edward F. Smith, III, Ph.D.**  
**Assistant Director**  
**Department of Pharmacology**  
**SmithKline Beecham Pharmaceuticals**  
**PO Box 1539, L510**  
**King of Prussia, Pennsylvania 19406-0939**

**3. Role of Neutrophils in the Pathogenesis of Sepsis**

- a. **Recruitment of neutrophils is beneficial in sepsis**  
**Steve Nelson, M.D.**  
**Associate Professor of Medicine and Physiology**  
**Department of Pulmonary and Critical Care**  
**Department of Medicine**  
**LSU**  
**New Orleans, LA**
- b. **Neutrophils Mediate Host Tissue Destruction in Sepsis**  
**Harvey J. Sugerman, M.D.**  
**Department of Surgery**  
**Medical College of Virginia**  
**Richmond, Virginia**

This informative scientific exchange on the newest topics of interest to both clinical and basic scientists made the Santa Fe Meeting a most memorable event.

Sincerely,

**James A. Cook, Ph.D.**  
**1993 Program Chairman**  
**Secretary, Shock Society**